REMARKS

Claims 1 to 3, 6 to 8, 10 to 12, and 15 to 22 are pending.

It is respectfully submitted that all of the presently pending claims are allowable, and reconsideration is respectfully requested.

Claims 1 to 3, 6 to 8, 10 to 12, and 15 to 22 were rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent Application Publication No. 2004/0048142 ("Marusak"), in view of U.S. Patent No. 6,690,140 ("Larson"), in further view of U.S. Patent No. 5,739,737 ("Hatton").

To reject a claim under 35 U.S.C. § 103(a), the Office bears the initial burden of presenting a *prima facie* case of obviousness. *In re Rijckaert*, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993). To establish *prima facie* obviousness, three criteria must be satisfied. First, there must be some suggestion or motivation to modify or combine reference teachings. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). This teaching or suggestion to make the claimed combination must be found in the prior art and not based on the application disclosure. *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991).

Also, as clearly indicated by the Supreme Court in *KSR*, it is "important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the [prior art] elements" in the manner claimed. *See KSR Int'l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727 (2007). In this regard, the Supreme Court further noted that "rejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *Id.*, at 1396. Second, there must be a reasonable expectation of success. *In re Merck & Co., Inc.*, 800 F.2d 1091, 231 U.S.P.Q. 375 (Fed. Cir. 1986). Third, the prior art reference(s) must teach or suggest all of the claim features. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974).

Claim 1 relates to a vehicle electrical system powered by a battery to supply a plurality of loads. The vehicle electrical system of claim 1 includes an integrated module positioned between a positive terminal of the battery and the plurality of loads, the integrated module having a terminal at which a generator is connectable, and in which *the integrated module further includes an electronics unit for at least one of regulation of the generator and diagnosis of the generator.*

The Marusak, Larson, and Hatton references do not disclose (or even suggest) the feature that *the integrated module further includes an electronics unit for at least one of regulation of the generator and diagnosis of the generator*, as provided for in the context of claim 1.

The Final Office Action specifically admits at page 4 that the Marusak reference does not disclose or suggest the feature of "an electronics unit for regulation of the generator," but conclusorily asserts that the feature of "an electronics unit for at least one of diagnosis of the generator" is found in paragraphs 10, 29, and 43 of the Marusak reference (stating that "diagnos[is] of the battery ... is effectively the same as diagnosis of the generator"). However, the Marusak reference merely refers to measuring a condition of a battery and comparing that measured battery condition to maximum operating parameters of the battery. (Marusak, ¶ [0010]). The Marusak reference does not disclose diagnosing a generator, as provided for in the context of the claimed subject matter. Instead, the Marusak reference merely refers to diagnosing a battery, which the Final Office Action assumes is the same as diagnosing a generator.

In this regard, the Final Office Action at page 9 specifically admits that "there are potential scenarios where a short circuit between the battery and the measuring device may result in [an] 'adverse change' ..., and would consequently not be an accurate indication that the generator itself had malfunctioned." Thus, a measured battery condition does not necessarily indicate a condition of a generator. For example, it is possible for a generator to be perfectly operational, while other components of a vehicle electrical system may cause adverse changes to the measured battery condition.

Accordingly, diagnosing a battery may merely lead to possible, unvalidated assumptions regarding the condition of a generator, but clearly is not the same as diagnosing a generator. Further, the Final Office Action at page 9 merely asserts that "it is entirely appropriate to measure the output of the generator in order to accomplish said diagnosing." However, it is respectfully submitted that the Marusak reference does not disclose this asserted measuring of the output of the generator. Also, attempting to diagnose or measure the output of the generator by measuring a battery condition is not the same as diagnosing the generator itself.

Moreover, the Final Office Action at page 10 merely asserts that "[o]ne of ordinary skill in the automotive arts unquestionably knows that a bad battery is an indication of a bad generator." In this regard, it is respectfully submitted that a 'bad battery' may simply be a

battery that has run its useful life while the generator continues to function normally. Thus, it is not necessarily the case that a 'bad battery' indicates a 'bad generator,' as asserted by the Final Office Action.

Therefore, contrary to the assertions of the Final Office Action, it is respectfully submitted that measuring a condition of a battery does not correspond to diagnosing a generator, as provided for in the context of the claimed subject matter Accordingly, the Marusak reference does not disclose (or even suggest) the feature in which *the integrated module further includes an electronics unit for at least one of regulation of the generator and diagnosis of the generator*, as provided for in the context of claim 1.

Further, the Larson reference also does not disclose (or even suggest) the feature in which the integrated module further includes an electronics unit for at least one of regulation of the generator and diagnosis of the generator, as provided for in the context of claim 1. In particular, the Larson reference does not disclose (or even suggest) regulation of a generator and diagnosis of a generator. The Larson reference merely refers to a conventional alternator which provides a constant voltage D.C. output. (Larson, col. 3, lines 63 to 64; col. 5, lines 31 to 37; Figures 2 and 3, elements 15 and 115 (emphasis added)). Nowhere does the Larson reference indicate that its ESC regulates the alternator and diagnoses the alternator.

Instead, the Larson reference only states that "a controllable voltage regulator 21 [is] used for regulating the recharging of battery pack 25." (Larson, col. 3, lines 41 to 42). The Larson reference merely refers to a controllable voltage regulator that receives constant voltage from the alternator and controls the voltage sent to the battery for recharging. (Larson, col. 4, lines 25 to 40; col. 6, lines 47 to 49; and col. 6, lines 56 to-60). Thus, the Larson reference merely refers to regulating the voltage supplied to the battery, but does not disclose regulating the alternator itself, which operates in a conventional manner by outputting a constant D.C. voltage. Further, the Larson reference merely refers to diagnosing a battery, but does not disclose diagnosing the alternator itself. (Larson, col. 3, line 49).

As explained above, simply diagnosing a battery is not necessarily equivalent to diagnosing the alternator itself, as the condition of the battery is not necessarily indicative of the condition of the alternator. Thus, nowhere does the Larson reference refer to an electronics unit for at least one of regulation of the generator and diagnosis of the generator, as provided for in the context of claim 1.

In addition, the Final Office Action at pages 4 to 5 states that the Larson reference discloses "regulat[ing] and diagnos[ing] the battery/pack by making adjustments to the

generator output. Since the battery is directly connected to the generator, the generator output is also effectively diagnosed." As explained above, it is respectfully submitted that the Larson reference does not disclose this asserted measuring of the output of the generator, and that in addition, attempting to diagnose or measure the output of the generator by measuring a battery condition is not the same as diagnosing the generator itself. Therefore, the Larson reference does not disclose (or even suggest) the feature that *the integrated module further includes an electronics unit for at least one of regulation of the generator and diagnosis of the generator*, as provided for in the context of claim 1.

Moreover, the Larson reference specifically teaches away from this claim feature of claim 1. The Larson reference requires a constant voltage D.C. output from the alternator, and refers to several voltage regulators that separately modify the constant voltage received from the alternator and supply each of low voltage, intermediate voltage, and high voltage systems independently of one another. (Larson, col. 3, lines 6 to 15). Thus, the Larson reference requires a constant voltage D.C. output from the alternator in order to be able to simultaneously provide modified voltage levels to each of the supplied systems. For this additional reason, it is respectfully submitted that the Larson reference does not disclose (or even suggest) the feature that *the integrated module further includes an electronics unit for at least one of regulation of the generator and diagnosis of the generator*, as provided for in the context of claim 1.

In addition, the Hatton reference does not disclose (or even suggest) the feature that *the integrated module further includes an electronics unit for at least one of regulation of the generator and diagnosis of the generator*, as provided for in the context of claim 1. As explained above, the Marusak and Larson references do not disclose (or even suggest) all of the features of claim 1. The Hatton reference does not cure - and is not asserted to cure - the critical deficiencies of the Marusak and Larson references.

Therefore, the proposed combination of the Marusak, Larson, and Hatton references does not render unpatentable claim 1 for at least the reasons provided above, so that claim 1 is allowable.

Claims 2, 3, 6 to 8, 10 to 12, and 15 to 18 depend from claim 1, and are therefore allowable for at least the same reasons as claim 1.

Claim 19 includes features similar to those of claim 1 (as well as further features), and is therefore allowable for at least essentially the same reasons provided above, as are its dependent claims 20 to 22.

Withdrawal of the obviousness rejections of the claims is therefore respectfully requested.

In sum, claims 1 to 3, 6 to 8, 10 to 12, and 15 to 22 are allowable.

CONCLUSION

It is therefore respectfully submitted that all of the presently pending claims 1 to 3, 6 to 8, 10 to 12, and 15 to 22 are allowable. It is therefore respectfully requested that the rejections (and any objections) be withdrawn, since all issues raised have been addressed and obviated. An early and favorable action on the merits is therefore respectfully requested.

Respectfully submitted,

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